



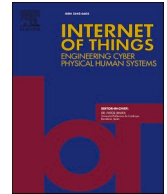
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Contents lists available at ScienceDirect

Internet of Things

journal homepage: www.sciencedirect.com/journal/internet-of-things

Special Issue: IoT Toward COVID-19

The COVID-19 pandemic has made a humongous impact in almost every sector across the world. Spanning from healthcare to transports, from education to manufacturing, the shudders of the COVID-19 have been felt in almost all domains. The disruptions have touched different aspects of our daily lives, and after more than two years with the pandemic, almost everything has started to adapt to the new lifestyle. As it is said *mater artium necessitas*, with ensuing challenges posed by the COVID-19, there has been an increasing interest worldwide in developing virtual solutions. Despite initial barriers, a significant level of acceptance in the domain of virtual services has been seen during the course of the pandemic.

Internet of Things (IoT) always aimed at a connected environment or ecosystem rather than isolated devices just sharing connections, in order to improve efficiency and bring holistic and comprehensive information to the surface, with minimum human intervention. As the pandemic throttled the drive toward smart devices especially in the domain of healthcare, the demand of smart and virtual solutions acted as a catalyst toward the IoT boom.

COVID-19 has shown direct influence in the domain of IoT, involving solutions like wearable devices, testing and tracing, and remote healthcare. But in an extended picture, it had influenced a wide gamut of areas like enhanced sensing solutions, smart homes and offices, smart ventilation systems, visitor management systems, smart manufacturing and logistics, and smart cities. On one hand, as the pandemic has invoked a sharp push in the use of these IoT solutions, on the other hand, the key issues in the domain of IoT got more pronounced, like data security and privacy, interoperability issues, and the disparities among hardware and software for the IoT. From a user perspective, data security and privacy are key concerns; especially in the domain of healthcare which deals with critical health data, one of the principal challenges to IoT is the aspect of security and privacy. Implementation of IoT in COVID-19 not only involved healthcare, but a transdisciplinary approach both from the developmental and implementational perspectives.

2022 sees a forecast of 29 billion connected devices, of which around 18 billion will be related to IoT. As the COVID-19 pandemic has propelled newer perspectives in the domain of IoT across the world, the aim of this special issue *IoT Toward COVID-19* is to contribute to this global discussion on IoT and COVID-19, providing a platform to showcase the state-of-the-art research and development in this field, addressing the key necessities and challenges of the solutions related to COVID-19. Considering the advancements in the field of IoT through innovations from areas like sensing, networking and communications, infrastructures, secured data storage systems, cloud and edge computing, intelligent data management, and artificial intelligence, this special issue proffers a common platform for different stakeholders toward discussing their take on IoT in combating the COVID-19 pandemic, which not only has shown newer aspects of day-to-day life, but also keeps a footprint in shaping the future of the digital and technological universe.

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E-mail address: paragc@ieee.org.<https://doi.org/10.1016/j.iot.2022.100519>Available online 7 March 2022
2542-6605/© 2022 Published by Elsevier B.V.Please cite this article as: Prof. Parag Chatterjee, *Internet of Things*, <https://doi.org/10.1016/j.iot.2022.100519>